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Issued: September 15, 2011 Reply to: Dan Worcester

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The unapproved minutes of the 09.14.2011 Sequence VI Surveillance Panel Conference Call.

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The meeting was called to order at 2:35 PM by Chairman Charlie Leverett.

Agenda

The Agenda is the included as Attachment 1.

1.0 Roll Call

The Attendance list and votes on the two motions is Attachment 2.

2.0) Approval of minutes

2.1) Approval of the minutes of the 06.29.2011 Conference Call. NOTE: A later version was sent out with an update from OHT on the VID engine supply.

Motion – Accept the minutes of the 06.29.2011 VID SP CC. Unanimous.

3.0) Action Item Review

3.1) OHT to report VID engine usage and expected depletion date at all Surveillance Panel meetings. **Will be on-going.**

As of 09.14.2011, there are 56 engines in inventory at OHT. See Attachment 3.

- 3.2) VID Engine Rebuild Task Force Update on 2011 engine at SwRI **We will discuss later in old business.**
- 3.3) A new action will be generated for labs to take a used oil sample at the end of Stage 6 for oil 1010. This will be analyzed using the same procedure and tests done during VID test development.

4.) Old Business

4.1) Review initial data from reference oil RO 1010, we determined we The decision was made 6/29/2011 to not update targets and review again at 20 tests on this oil.

The decision was made to not update targets and review again at 30 tests on this oil on the previous call. Recent results with 1010 as the final reference oil for a new stand/engine combination have been more severe and required that at least one engine be abandoned. There was a request to have the Stat Group review 1010 reference oil data.

4.2) Update on Engine Build Task Force

The 2011 Malibu engine had failed rod bearings when a reference test was started. The Task Force will have a meeting for the next steps to take. This will probably be a Face to Face at SwRI so Test Engineers can see the engine and differences to the 2009 version. GM supplied one engine to SwRI to see if it would run on the VID modified E77 module and hardware. It does. The question was asked whether other labs could get the new engine. There is about a 6 month window for this PFI engine being available.

5.) New Business

5.1 Dave has asked that we discuss the following:

I recently had a situation where D7589 required redundant instrumentation calibration. I feel a re-wording of Section 10.2 *Instrumentation Calibration*, may be warranted.

Section 10.2 requires:

- 1. Complete test stand instrumentation calibration every six months on parameters as shown in Table 6 (big list).
- 2. Parameters shown in Table 6 shall be calibrated prior to the initial test on a new stand/engine calibration sequence.
- 3. A previously calibrated (existing) stand engine will the parameters as shown in Table 7 (short list).

Afton recently has a new engine that failed to calibrate. We were required by the procedure to complete an additional complete test stand instrumentation calibration prior to initiating testing on a replacement engine. I am not sure why the procedure worries about calibrating all parameters in Table 6 with a new engine. I feel the six month calibration is sufficient and would offer a motion for change at a future meeting, eliminating the third sentence in Section 10.2 (my line #2 above) if you gentlemen are in agreement.

MOTION: Modify D7589 as follows

Section 10.2:

...Perform a complete test stand instrumentation calibration every six months on parameters as shown in Table 6. Parameters shown in Table 6 shall be calibrated prior to the initial test on a new stand/engine calibration sequence [this will be deleted]. A previously calibrated (existing) stand/engine will require the parameters as shown in Table 7.

Dave Glaenzer/Rich Grundza second Passed unanimously.

5.2) Reference Oil 541 – Rich informed me TMC is down to our last drum of 541 which means ~ 11 tests. Each lab has at least one test's worth in house. A reblend, 541-1, is available and he would like to just advice the panel the sometime in the next 8 to 12 months we will need to introduce this reblend. Some of the current blend will be retained so a back up run for comparison can take place should a new blend reference test fail and that be questioned.

5.3) Dan has requested the following motions be made:

MOTION: Modify D7589 as follows

Section 10.1.1.2 Recommend keeping the 10 tests or 1750 hours, but extend the time period to 180 days. Currently it is 100 days

Section 10.1.1.4 Change to 180 days. Currently it is 100 days

Dan Worcester/George Szappanos second 1 yes, 6 no, 4 waive. The motion failed.

For the next two motions, there seemed to be confusion on what would be considered a modified test that would not change the stand/engine combination. These motions were withdrawn and a presentation made at the next VID Face to Face meeting.

Section 10.1.1.8 Recommend that if non-standard test where hardware at the stand or engine is changed, a calibration test is required. If a non-standard test is run with a different program and the original program re-installed at completion, the calibration period is still in effect. Current wording is: If non-standard tests are conducted on a calibrated engine or test stand, recalibrate the stand and engine prior to running standard tests.

Section 11.6.2.3 (9) Add the following: If total fuel consumption percentage delta falls outside of these values, conduct BLB3 by repeating steps 1 through 9, or investigate potential causes and restart test at BLB1. Currently reads: Compare total fuel consumption between BLB1 and BLB2. The percentage delta between BLB1 and BLB2 shall fall within (-0.20 to +0.40) %. If total fuel consumption percentage delta falls outside of these values, conduct BLB3 by repeating steps 1 through 9. If the percentage delta between BLB2 and BLB3 exceeds (-0.20 to +0.40) %, investigate potential cause and restart test at BLB1.

Section 11.6.2.3 Modify the wording to match (9) above so the lab can choose to run BLB3 or restart the test at BLB1. Make a note in the test report if the test is restarted.

- 5.4) Any additional New Business?
 - **5.2)** There was no New Business.
- 6.) Next Meeting

At the call of the chairman

7.) Meeting Adjourned

The meeting adjourned at 3:10 PM.

Sequence VI Surveillance Panel conference Call September 14, 2011 @ 2:30 CT

Agenda

1.0) Roll Call

2.0) Approval of minutes

2.1) Approve the minutes from the 06/29/2011 Sequence VI Surveillance Panel conference call.

3.0) Action Item Review

- 3.1 OHT to report VID engine usage and expected depletion date at all Surveillance Panel meetings. **Will be on-going. As-of 3/11/11 there are 57 engines in inventory at OHT.**
- 3.2) VID Engine Rebuild Task Force Update on 2011 engine at SwRI. **We will discuss later in old business.**

4.) Old Business

- 4.1) Review initial data from reference oil RO 1010, we determined we The decision was made 6/29/2011to not update targets and review again at 20 tests on this oil.
- 4.2) Update on Engine Build Task Force Discussion of 2011 MY engine failure at SwRI and steps going forward.

5.) New Business

5.1 Dave has asked that we discuss the following:

I recently had a situation where D7589 required redundant instrumentation calibration. I feel a re-wording of Section 10.2 *Instrumentation Calibration*, may be warranted.

Section 10.2 requires:

- 1. Complete test stand instrumentation calibration every six months on parameters as shown in Table 6 (big list).
- 2. Parameters shown in Table 6 shall be calibrated prior to the initial test on a new stand/engine calibration sequence.
- 3. A previously calibrated (existing) stand engine will the parameters as shown in Table 7 (short list).

Afton recently has a new engine that failed to calibrate. We were required by the procedure to complete an additional complete test stand instrumentation

calibration prior to initiating testing on a replacement engine. I am not sure why the procedure worries about calibrating all parameters in Table 6 with a new engine. I feel the six month calibration is sufficient and would offer a motion for change at a future meeting, eliminating the third sentence in Section 10.2 (my line #2 above) if you gentlemen are in agreement.

- 5.2) Reference Oil 541 Rich informed me TMC is down to our last drum of 541 which means ~ 11 tests. Each lab has at least one test's worth in house. A reblend, 541-1, is available and he would like to just advice the panel the sometime in the next 8 to 12 months we will need to introduce this reblend.
- 5.3) Dan has requested the following motions be made:
 - **Section 10.1.1.2** Recommend keeping the 10 tests or 1750 hours, but extend the time period to 180 days. Currently it is 100 days
 - **Section 10.1.1.4** Change to 180 days. Currently it is 100 days
 - **Section 10.1.1.8** Recommend that if non-standard test where hardware at the stand or engine is changed, a calibration test is required. If a non-standard test is run with a different program and the original program re-installed at completion, the calibration period is still in effect. Current wording is: If non-standard tests are conducted on a calibrated engine or test stand, recalibrate the stand and engine prior to running standard tests.
 - Section 11.6.2.3 (9) Add the following: If total fuel consumption percentage delta falls outside of these values, conduct BLB3 by repeating steps 1 through 9, or investigate potential causes and restart test at BLB1. Currently reads: Compare total fuel consumption between BLB1 and BLB2. The percentage delta between BLB1 and BLB2 shall fall within (–0.20 to +0.40) %. If total fuel consumption percentage delta falls outside of these values, conduct BLB3 by repeating steps 1 through 9. If the percentage delta between BLB2 and BLB3 exceeds (–0.20 to +0.40) %, investigate potential cause and restart test at BLB1.
 - **Section 11.6.2.3** Modify the wording to match (9) above so the lab can choose to run BLB3 or restart the test at BLB1. Make a note in the test report if the test is restarted.
- 5.4) Any additional New Business?

6.) Next Meeting
At the call of the chairman

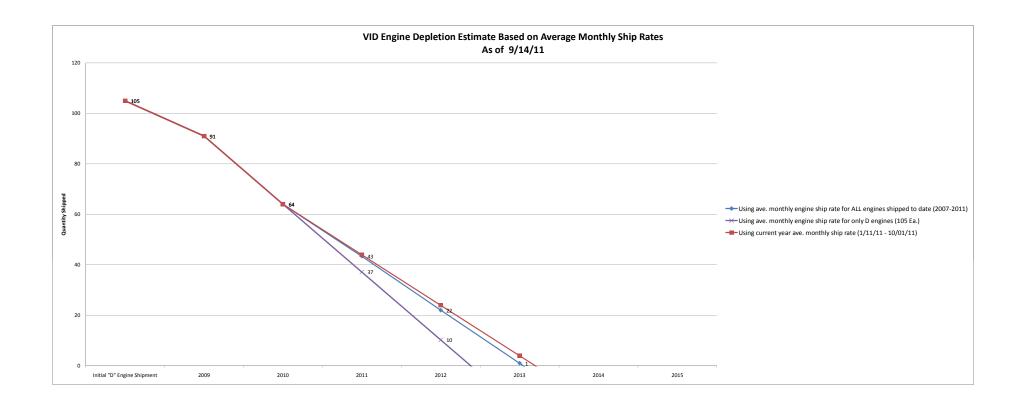
7.) Meeting Adjourned

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Andy Ritchie Voting Member Cocclander Ande	Infineum 1900 East Linden Ave. Linden, NJ 07036-0735	Phone: 908-474- Fax: 908-474-3637	A	N			
Ron Romano Voting Member	Ford Motor Company 21500 Oakwood Blvd POEE Bldg Rm DR 167 MD 44 Dearborn, MI 48121-2053	Phone: 313-845-4068 rromano@ford.com	A	N			
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ASTM SEQUENCE VI SURVEILLANCE PANEL

Guest Present at meeting Matt Snider Bib Olice Mike McMillian Donle Done Lather Matt of Adam Bowder Claylor Knight Jo Martinez	Name	Address	Phone/Fax/Email	Attendance
Matt Saider Bob Olive Mikr. McMillea Darle Bose Witht Matt & Adam Bowda Clartor Knight So Martines				
Matt Saider Bob Olive Mikr. McMillea Darle Bose Witht Matt & Adam Bowda Clartor Knight So Martines	Guest Present at	mooting		
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Bob Olfree M. Kr. McMillan Doule Bose Durcht Matt & Adam Bowden Clayton Knight So Martinez	Matt 3	Spider		
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	VID Engine Quantity Required for GF5 using Ave. Monthly Ship Rate for all Engines		
VID Engine Quantity Required for GF5 using Ave. Monthly Ship Rate for "D" Engines Only	Shipped to Date Average Monthly Ship Rate by Y		hip Rate by Year
As of: 9/14/10 (Ship Dates from 8/9/09-9/14/11)	As of: 9/14/11	2007	1.00
Average = 56 engines / 25 months = 2.24	Average= 1.72	2008	2.00
		2009	1.67
Months left in GF-5 (10/01/11 thru 12/31/2015) (51)	Months left in GF-5 (10/01/11 - 12/31/2015) (51)	2010	2.25
		2011	1.67
51 months X 2.24 per month = 114	51 months X 1.72 per month = 88	2012	
		2013	
Current Engine Balance (9/14/11) (49)	Current Engine Balance (9/14/11) (49)	2014	
	, , , ,	2015	
Difference (114-49= 65)	Difference (88-49=)		
Quantity Short	Quantity Short		
65	39		



VID Engine Shipments by Year

